

CLAIMS

WHAT IS CLAIMED IS:

1. A one piece piston for an internal combustion engine comprising:

- a) a piston head formed along a longitudinal piston axis;
- b) at least two pin boss supports molded in said piston head;
- c) at least two pin bosses formed from said at least two pin boss supports wherein said at least two pin boss supports and a set of faces for said at least two pin bosses are set back relative to a radially outer edge of said piston head, in a direction of said longitudinal piston axis;
- d) at least two skirt elements coupling said at least two pin bosses for connecting said at least two pin bosses together;
- e) at least one skirt connection for connecting said skirt elements to said piston head; wherein said at least one skirt connection form a concave recess between said skirt elements and said piston head;

f) at least one ring wall having at least one pin-boss side face and coupled to said piston head, forming at least one ring shaped cooling channel extending around an outer region of said piston head, wherein a radially outer region is delimited by said ring wall and a radially inner region is formed at least partially by said at least two pin boss supports and at least partly by said at least one skirt connection; and

g) at least one cooling channel cover extending between said at least one skirt connection and said at least one ring wall, wherein said at least one cooling channel cover comprises at least two arc shaped cover elements, which close off said cooling channel towards a side of said at least two pin bosses, wherein an inner edge of said cooling channel cover, is supported in a recess which is worked at least partly into said at least two pin boss supports and at least partly into at least one skirt connection, and wherein an outer edge of said at least one cooling channel cover supports said at least one ring wall.

2. The piston as in claim 1, wherein said at least two cooling channel cover elements are formed semi-circular.

3. The piston as in claim 1, wherein said cooling channel cover is structured so that it can be clamped between said ring wall face and said recess in said at least two pin boss supports.

4. The piston as in claim 3, wherein said at least one ring wall face has a step-shaped undercut and wherein said at least one cooling channel cover has a step-shaped recess formed so that when said cooling channel cover is assembled, a step is formed by said step-shaped recess which snaps into said step-shaped undercut of said ring wall face.